



## DEPARTMENT OF THE ARMY

VICKSBURG DISTRICT, CORPS OF ENGINEERS  
4155 CLAY STREET  
VICKSBURG, MISSISSIPPI 39183-3435

REPLY TO  
ATTENTION OF:

Planning, Programs, and  
Project Management Division  
Planning and Project  
Management Branch

23 NOV '09

Mr. Billy Orr, Chairman  
Rankin-Hinds Pearl River Flood  
and Drainage Control District  
P.O. Box 320069  
Flowood, Mississippi 3932-0069

Dear Mr. Orr:

I refer to your letter of November 4, 2009, requesting additional Pearl River Watershed studies, which would be directed at further investigations of the National Economic Development (NED) comprehensive levee plan and the LeFleur Lakes plan (LLP), and two additional alternatives referred to as the "Two Lakes plan" and the "Lower Lake plan".

We have reviewed the information you provided and given the extensive studies to date and the likely adverse impacts associated with all lake plans, the Corps has determined it is not in the Federal interest to continue studying additional impoundment alternatives, especially when one (Two Lakes Plan) is not materially different from the LLP previously studied and the other is a smaller version of the LLP incorporated into the NED plan. The NED comprehensive levee plan is the only plan that continues to demonstrate Federal interest in further studies to provide flood risk reduction in the Pearl River Watershed.

The Rankin-Hinds Pearl River Flood and Drainage Control District and the U.S. Army Corps of Engineers, Vicksburg District, executed a Feasibility Cost-Sharing Agreement (FCSA)

for studies of the Pearl River Watershed on October 6, 2003. The studies conducted to date fully comply with the executed agreement as documented in the February 2007 report. Further studies would not lead to a recommendation for implementing any impoundment alternative as a Federal flood risk reduction project. Based on these findings, studies are hereby terminated. The process for study termination is included in Article X - Termination or Suspension of the FCSA. We are complying with the terms of the agreement set forth in this Article.

In reaching this determination, we compared the information you provided for the Two Lakes and Lower Lake alternatives with data developed in the February 2007 preliminary draft study report for the NED plan and the LLP. A summary of our findings is presented below. Additional information is provided in the enclosed Decision Paper. Detailed feasibility studies would be required to determine costs, benefits, environmental consequences, degree of flood protection provided, etc., for these alternatives; however, we believe our preliminary conclusions reasonably approximate the findings of additional studies.

The NED comprehensive levee plan provides for significantly less adverse environmental impacts than any of the lakes (impoundment) plans. None of the additional impoundment alternatives, for which you request further study, are environmentally acceptable and therefore fail the National Environmental Policy Act (NEPA) "reasonable alternatives" test. All of your impoundment alternatives are some variation of the LLP previously considered and would result in unacceptable environmental impacts.

For the purposes of flood risk reduction, the Two Lakes plan is not materially different from the LLP. Your most recent Two Lakes plan includes levees, only in Richland, Mississippi. The degree of flood protection for this plan is estimated at



approximately 56 percent. The LLP, without any levees and other improvements in downstream reaches, would provide a degree of protection of approximately 52 percent. The single impoundment, Lower Lake plan, with a surface area of approximately 2,418 surface acres, is estimated to provide a degree of flood risk reduction estimated at 79 percent, the same protection as provided by the NED levee plan. Total project costs for the Two Lakes and Lower Lake plans are estimated at approximately \$800 and \$900 million, respectively. The higher cost for the Lower Lake plan is attributable to combining the total project cost for the NED levee plan with costs for a significant portion of the LLP. The Lower Lake plan also has greater environmental impacts than the recommended levee plan. These cost estimates are conservative with many variables which could cause higher estimates.


The Two Lakes plan also includes features which extend beyond the Federal capability for implementation as a flood risk reduction project. In particular, this plan includes dredging underneath the state highway bridges crossing the Pearl River to improve flow conveyance and regulation of the Ross Barnett Reservoir. Early in the study process, coordination was conducted with the Mississippi Department of Transportation (MDOT) concerning the LLP. The MDOT informed the Vicksburg District that no dredging would be allowed near any of the bridges. We have also investigated the possibility of using Ross Barnett Reservoir, which is under the control of the Pearl River Valley Water Supply District, for flood risk reduction. We have determined that Ross Barnett Reservoir, which was constructed for the purposes of water supply and recreation, has little capability for reducing downstream flooding.

Any delay in moving forward with a plan to provide flood risk reduction, due to a desire for regional economic development, in the flood plain, unnecessarily leaves the community at continued risk of significant flooding. The Corps is committed to working with local stakeholders to reduce flood

risk in the Pearl River Basin. However, the Corps cannot recommend implementation of alternatives with environmentally unacceptable impacts when an alternative exists to provide flood risk reduction with significantly less environmental impacts.

The recommended plan complies with Federal policies concerning flood risk reduction and would have the least impact on the environment. Should the Rankin-Hinds Pearl River Flood and Drainage Control District wish to pursue the NED comprehensive levee plan at some future date, please contact Mr. Gary Walker, Senior Project Manager (telephone (601) 631-5469).

Sincerely,

A handwritten signature in blue ink, appearing to read "Michael C. Wehr", is written over the typed name.

Michael C. Wehr  
Colonel, Corps of Engineers  
District Commander

Enclosure



## DECISION PAPER

### TERMINATION OF THE PEARL RIVER WATERSHED, MISSISSIPPI, STUDY

By letter dated 1 July 2009, the U.S. Army Corps of Engineers, Vicksburg District, informed the Rankin-Hinds Pearl River Flood and Drainage Control District (Drainage District) that it had to make a decision by 30 September 2009 as to whether they would support the National Economic Development (NED) (Corps levee) plan outlined in the Pearl River Watershed, Mississippi, Feasibility Study, Main Report, Preliminary Draft, dated February 2007 (report) or the study would be terminated. Following a public release of the report, the Drainage District held a board meeting, open to the public, on 28 September 2009 in the offices of the Vicksburg District in Vicksburg, Mississippi. The Corps made a presentation of its analysis of the NED plan and the LeFleur Lakes plan (LLP), as presented in the report. The Corps stated that it would not support any plan other than the NED plan based primarily on environmental impacts, but economics and flood damage reduction were also factors. Pursuant to a request for time for the Drainage District to consider the analysis, an indefinite extension of the 30 September 2009 deadline was granted.

Following the 28 September meeting, the Drainage District held an "offsite" meeting to decide which plan it would support. No Corps representative was present. By letter dated 4 November 2009, the Drainage District informed the Corps that it was their position that the Corps should examine the alternatives previously presented by the Drainage District to the Corps in their 10 August 2009 Resolution, as explained in their engineering description of the alternatives submitted with their letter. It was their desire to select the option presented at the 28 September board meeting to continue studying the preliminary draft report and additional impoundment alternatives. Continued study is estimated to cost \$4 million and require 4 years to complete. The Drainage District questioned the estimated study cost and time required, stating costs were too high and the time required too long.

The Vicksburg District verbally informed the Drainage District during the 28 September meeting that it would not support any plan other than the NED comprehensive levee plan. The Drainage District never presented any formal response to the preliminary draft 2007 report. The Corps lacked the benefit of any input/analysis by the Drainage District as requested by Corps letter dated 14 February 2007. The Drainage District failed to present any analysis of the NED and LLP plans in their 28 September 2009 meeting, and none was presented in their letter of 4 November 2009.

### EXECUTIVE SUMMARY

I find that it is not in the Federal interest to continue studying additional impoundment alternatives, especially when none of the proposed alternatives are either not materially different from the LLP previously studied such as the Two Lakes plan or are a smaller version of the LLP

*enclosure*



such as the Lower Lake plan which incorporates a lake with islands into the NED plan. A request to study an alternative without any minimal supporting analysis of its environmental, economic, or flood risk reduction impacts and benefits does not further the goal of providing realistic flood damage risk reduction for the city of Jackson and surrounding communities in that reach of the Pearl River Basin.

## **BACKGROUND**

The history of the efforts to provide a project for flood risk reduction prior to 2007 is adequately presented in the report and will not be repeated. Actions since the preparation of that report will be discussed.

Section 3104 (a) of the Water Resources Development Act (WRDA) of 2007, Public Law 110-114, authorized the Secretary of the Army to construct the project for flood damage reduction, Pearl River Basin, generally in accordance with the plan described in the "Pearl River Watershed, Mississippi, Feasibility Study, Main Report, Preliminary Draft" dated February 2007. Section 3104(b) directs the Secretary to compare the level of flood damage reduction provided by the plan that maximizes NED benefits of the project and the locally preferred plan, referred to as the LLP. Subject to the conditions stated in Section 3104(c), the Secretary may construct either the NED plan or the LPP. A significant condition presented in §3104(c)(1) states, in pertinent part, that the Secretary of the Army may construct the LLP if "the locally preferred plan is environmentally acceptable."

By letter dated 14 February 2007, the Vicksburg District requested formal comments from the Drainage District on the report. No formal comments were ever received to assist the Corps in its decision-making process. The Drainage District failed to assist the Corps in comparing the NED and LLP plans. The Corps did make that comparison and analysis which it presented to the Drainage District on several occasions prior to and as late as the 28 September meeting.

The comparison revealed that the LLP plan was not environmentally acceptable. The Drainage District has not factually rebutted this finding. It has asserted verbally that §3104 acts as a waiver of the requirements of National Environmental Policy Act (NEPA) and the Clean Water Act to allow construction of the LLP. I disagree with that assertion. The Clean Water Act prohibits discharges of dredge or fill material into a water of the United States, including wetlands if a less damaging practicable alternative to the aquatic environment exists. The NED levee plan is a less damaging practicable alternative when compared to the LLP and any of the additional impoundment alternatives sought to be studied by the Drainage District.

In addition, the LLP and any other plan involving an impoundment has impacts to the threatened Gulf sturgeon and the threatened ringed sawback turtle. These impacts do not exist with the NED levee plan. Thus, the LLP or any other plan involving an impoundment is not a less damaging practicable alternative to the NED plan.



The LLP provided a degree of protection of approximately 91 percent as compared to 79 percent for the NED plan. The NED levee plan captures 100 percent of the benefits from river flooding, but has some residual flooding due to interior drainage. The high level of protection for the LLP can be attributed to the levees included in the downstream reaches of the project area, in particular, Town and Lynch Creeks, Richland, and south Jackson, Mississippi. Without these levees, flooding in these areas would be the same as for existing conditions. The LLP would provide a 52 percent degree of protection without these levees.

For the purposes of flood risk reduction, the latest variation of the LLP received by letter dated 4 November 2009 is not materially different from the LLP studied and documented in the preliminary draft report. These most recent variations of the Two Lakes plan includes levees only in Richland which would increase the degree of flood protection to approximately 56 percent. This percentage is based on the channelization and upper weir included in the latest Two Lakes plan providing approximately the same flood risk reduction as the LLP. The latest Two Lakes plan indicated total excavation of 38 million cubic yards and an upper weir 600 feet in length. The LLP included excavation of 62 million cubic yards and an upper weir 800 feet in length. Therefore, the degree of flood protection for the Two Lakes plan could be less than 56 percent. Significant study would be required to determine the actual percentage.

Flooding reverts to existing conditions immediately downstream of the lower weir as stated in our letter of 11 August 2009. Since flood stage reduction from any plan with lakes is primarily due to stream channelization, the south Jackson levee area, which is located below the lower weir, would not receive flood damage reduction from the Two Lakes plan. Additionally, both Lynch and Town Creeks would flow into the lower lake. This area would also not experience any significant flood reduction. The latest version of Two Lakes includes 36 islands ranging in size from 2 to 40 acres constructed from excavated material. In our opinion, absent compaction and/or bank protection such as stone riprap, much of this material would likely erode back into the channel.

The latest Two Lakes plan includes features which extend beyond the Federal capability for implementation as a flood damage reduction project. In particular, this plan includes dredging underneath the state highway bridges crossing the Pearl River to improve flow conveyance and regulation of the Ross Barnett Reservoir. Early in the study process, coordination was conducted with the Mississippi Department of Transportation (MDOT) concerning the LLP. The MDOT informed the Vicksburg District that no dredging would be allowed near any of the bridges; therefore, dredging beneath the highway bridges was not evaluated or included as part of the LLP. We have investigated the possibility of using Ross Barnett Reservoir, which is under the

control of the Pearl River Valley Water Supply District, for flood risk reduction since 1979. It is our finding that Ross Barnett Reservoir, which was constructed for the purposes of water supply and recreation, has little capability for reducing downstream flooding. Also, reservoir regulation could be implemented under existing conditions in the absence of other flood improvements if deemed feasible by the Pearl River Valley Water Supply District.

The One Lake or Lower Lake plan includes the NED plan with a lake constructed between the levees. This lake extending from the vicinity of I-20 to above Lakeland Drive encompasses approximately 2,418 surface acres, including two islands of 125 acres each. This plan would provide the same 79 percent degree of flood protection as the NED plan. Preliminary investigations of this plan conducted at the Drainage District's request in 2007 indicated the proposed levees in the upstream reaches of the project could be constructed to a lower elevation than in the NED plan resulting in some minor cost savings. However, this cost savings is projected to be more than offset by lake construction costs.

The tabulations below reflect the Corps preliminary findings. Information presented for the NED and LLP plans was taken from the February 2007 draft report. Information for other proposed plans are based on comparisons to the NED and LLP.

#### SUMMARY ENVIRONMENTAL COMPARISON OF ALTERNATIVES

Item	LLP Plan <u>a/</u>	NED (Levees) Plan <u>a/</u>	Two Lakes Plan <u>b/</u>	Lower Lake Plan <u>b/</u>
	(acres)			
Habitat impact	7,857	1,506	6,400	3,900
Bottom-land hardwood Impact	5,564	929	4,500	2,800
Wetland impact	2,200	931	1,800	1,100

a/ From February 2007 preliminary draft report.

b/ November 2009 preliminary estimate.

#### SUMMARY ECONOMIC COMPARISON OF ALTERNATIVES

Item	LLP Plan <u>a/</u>	NED Levees Plan <u>a/</u>	Two Lakes Plan <u>b/</u>	Lower Lake Plan <u>b/</u>
Degree of Protection	91%	79%	56%	79%
Estimated Project Costs	\$1.4 billion	\$206 million	\$800 million	\$900 million
Benefit-Cost Ratio	0.2	1.2	0.2	0.3

a/ From February 2007 preliminary draft report.

b/ November 2009 preliminary estimate.



By Resolution dated 10 August 2009, the Drainage District stated, in pertinent part, that:

“7. The existing PMP should be revised to ensure that the resulting draft report and subsequent final Decision Document fully complies with NEPA and provides for a strong, legally defensible position. Achieving this goal will require the rigorous exploration and objective evaluation of all reasonable alternatives that can be considered for the Jackson metro-area flood control project pursuant to 40 CFR §1502.14.

8. All reasonable alternatives should include, but not be limited to, (a) a full review of the 1996 Levee Plan; (b) a reasonable variation of the Levee Plan which includes a water impoundment feature; (c) the LeFleur Lakes Plan; (d) a reasonable variation of the LeFleur Lakes Plan as represented in the current Two Lakes Plan, as presented to the Board on May 11, 2009; and (e) those reasonable alternatives studied prior to the Preliminary Draft.”

By letter dated 4 November 2009, the Drainage District reaffirmed its position regarding further studies.

“Please accept this letter as the Rankin-Hinds Pearl River Flood Drainage Control District (the “District”) response to your letter of July 1, 2009 and a follow-up to our meeting on September 28, 2009, wherein the U.S. Army Corps of Engineers, Vicksburg District, (the “Corps”) advised the District that unless an agreement to complete a feasibility level of detail decision document and National Environmental Policy Act (“NEPA”) document (“Decision Document”) was in place by September 30, 2009 the Corps would terminate the existing Feasibility Cost-Sharing Agreement. This September 30, 2009 deadline was subsequently extended during our September 28th meeting with the Corps to a non-specific date in the immediate future.

The Board of Directors of the District (“Board”) met on October 12, 2009, to discuss the Corps’ position and the termination deadline. Upon a unanimous vote of the Board, it was decided that the District’s Resolution dated August 10, 2009 (a copy of which is attached) will continue to be the District’s official position. The Resolution requests that the Corps complete an evaluation and prepare a Decision Document that reports the impact of all reasonable alternatives, including “a reasonable variation of the Levee Plan, with a water impoundment feature,” as represented by the Lower Lake Plan; and “a reasonable variation of the LeFleur Lakes Plan as represented in the current Two Lakes Plan.”

The Resolution is essentially an assertion by the Drainage District that all of the alternatives listed in paragraph 8 of the Resolution are reasonable alternatives under 40 CFR §1502.14. This CFR provision states:

“Sec. 1502.14 Alternatives including the proposed action.

This section is the heart of the environmental impact statement. Based on the information and analysis presented in the sections on the Affected Environment (Sec. 1502.15) and the Environmental Consequences (Sec. 1502.16), it should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public. In this section agencies shall:

(a) Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.

(b) Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits.

(c) Include reasonable alternatives not within the jurisdiction of the lead agency.

(d) Include the alternative of no action.

(e) Identify the agency's preferred alternative or alternatives, if one or more exists, in the draft statement and identify such alternative in the final statement unless another law prohibits the expression of such a preference.

(f) Include appropriate mitigation measures not already included in the proposed action or alternatives.”

This CFR provision makes it clear that the Federal agency determines the reasonable alternatives to be considered in the NEPA process.

Guidance on alternatives to be considered in the planning process is found in Engineer Regulation (ER) 1105-2-100, “Planning Guidance Notebook.” The Resolution cites to this ER and specifically to paragraph 2-3.c. of ER 1105-2-100 that states:

“Step 3 - Formulation of Alternative Plans.

An alternative plan is a set of one or more management measures functioning together to address one or more objectives. A range of alternative plans shall be identified at the beginning of the planning process and screened and refined



in subsequent iterations throughout the planning process. However, additional alternative plans may be identified at any time during the process. Plans should be in compliance with existing statutes, administrative regulations, and common law or include proposals for changes as appropriate. Alternative plans shall not be limited to those the Corps of Engineers could implement directly under current authorities. Plans that could be implemented under the authorities of other Federal agencies, State and local entities and non-government interest should also be considered.”

The local sponsor takes the position that the Corps has the authority to consider additional reasonable alternatives developed after the initial creation of the February 2007 draft preliminary feasibility report. This is correct. It does not mean, however, that the Drainage District proposal that the study continue to a Final Report with an estimated additional cost of \$4 million and an estimated time of 4 years to complete is reasonable. The Corps focuses on whether the Two Lakes plan and all the other new alternatives presented in the Resolution are reasonable alternatives (environmentally acceptable) under NEPA and under ER 1105-2-100 and would therefore qualify for construction under §3104 of WRDA 2007.

### **DISCUSSION**

Resolution alternative (e) that seeks a reexamination of previously rejected alternatives should be summarily dismissed. The NEPA process outlined above in 40 CFR §1502.14 eliminated all unreasonable alternatives from further consideration. Any such alternative targeted by (e) is then, by definition, not a reasonable alternative.

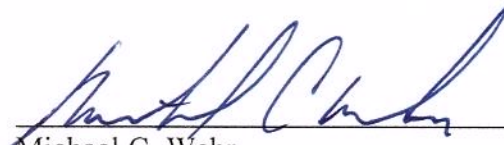
Alternative (d) is not worthy of consideration as a reasonable alternative based on its environmental damage and unacceptable cost. Even though the Two Lakes plan might not have been fully considered to the extent desired by some parties, an evaluation sufficient for the alternative analysis of NEPA was conducted. The Two Lakes plan was found to have unreasonable environmental damage and excessive cost.

None of the other alternatives put forth in the Resolution are environmentally acceptable alternatives and thus fail as reasonable alternatives for further consideration under NEPA. All of the suggested alternatives are some variation of the impoundment plan already considered in the report. All of the impoundment alternatives have unacceptable environmental impacts.

## DECISION

For the purposes of NEPA and the Clean Water Act, the NED comprehensive levee plan is a less damaging practicable alternative when compared to the LLP and any of the impoundment alternatives sought to be studied by the Drainage District. Further, the LLP and any of the impoundment alternatives do not meet the criteria of §3104(c)(1) for consideration for construction by the Secretary of the Army as an environmentally acceptable locally preferred plan. It is therefore not in the Federal interest to expend more time and resources to continue studying the report, especially when there is no realistic expectation that the LLP or any of the impoundment alternatives will ever qualify as the less damaging practicable alternative. Nothing in this decision precludes the Drainage District from continuing to study the LLP and any impoundment alternative on its own, but the requirements of NEPA and the Clean Water Act will still apply.

The Drainage District and the U.S. Army Corps of Engineers, Vicksburg District, executed a Feasibility Cost-Sharing Agreement (FCSA) for studies of the Pearl River Watershed on October 6, 2003. The studies conducted to date fully comply with the executed agreement as documented in the February 2007 report. Further studies would not lead to a recommendation for implementing any impoundment alternative as a Federal flood risk reduction project. Based on these findings, the decision was made to terminate studies. The process for study termination is included in Article X - Termination or Suspension of the FCSA. We are complying with the terms of the agreement set forth in this Article.

  
\_\_\_\_\_  
Michael C. Wehr  
Colonel, Corps of Engineers  
District Commander

Date: 20 Nov '09